1: Lattimore H-4 (no date) 1950 AI 1 Sinkiang AI 1
Kazak

acquire the determining political power within clans and tribes and secure the best allocations of pasture. Disputes over winter quarters are the most common cause of quarrels between clans and tribes, and similarly the fact that good winter quarters are often on land suitable for cultivation is the commonest cause of friction between Kazakh or Mongol nomads and colonizing Uighur or Chinese farmers.

The economic development of the Sinkiang and Russian Kazakhs has not been uniform since the Soviet Revolution. The pastoral economy of the Sinkiang Kazakhs has not improved, but conditions have become worse where the Chinese authorities have permitted colonization of some of their territory by Uighurs or Chinese. On the Soviet side of the frontier, the traditional nomadic economy has been strongly modified. "Clan collectivism" has given way to socialist collectivism. Winter quarters and summer pastures are owned by collectives which are not necessarily formed out of kinship clans; the breeds of livestock have been improved; and agriculture has been developed in combination with the pastoral economy. In addition industrialization has been introduced on a very large scale, including coal and copper mining. In coal mining, particularly, a fairly large Kazakh labor force is engaged; and out of industry and the improvements in farming and herding have developed opportunities for higher education and technical training.

The Kazakh language belongs to the Turkic group of the Altaic family, and is closely related to other Turkic languages in Inner Asia, and to Osman Turkish. The language of Sinkiang and Soviet Kazakhs is identical. There was almost complete illiteracy among both groups until the Soviet Revolution. The small number of literates, mainly within the upper classes and the clergy, used the Arabic alphabet, which is unsuited to the phonology of the Turkic languages. After the Bolshevik Revolution a Latin alphabet was introduced, with the addition of a few special letters; this script was replaced in 1940 by the Cyrillic alphabet, again with the addition of a few special letters. The attack on illiteracy went slowly in the first years under the Soviet system. In 1931, 77 per

alone, resources are available in such an abundance as can furnish the foundation for a thriving industrialization. 135

Iron, coal, copper and gold have been found near Sui-ting (I-li). Henceforth this important center on the Soviet-Chinese border may take its prosperous tea and fur trade for granted and brag, instead, of blazing furnaces. T'a Ch'eng (Chuguchak), a frontier locality on the road from the Turksib Railway and probably the only city to have boomed more than Sui-ting, is already boasting of the iron vein one hundred and thirty miles long which runs right through the town, and of the Black Oil Mountain nearby. The oil appears abundantly in the form of springs and is especially black and thick. It is probably a tar, for it gets hard and has been used in the laying ou and paving of the new provincial highways. There is coal too, not far away. But miners are nothing new for T'a Ch'eng; in the eighteenth and nineteenth centuries there were thousands of them prospecting in the fifty square miles or so of gold mines roundabout, or so the old people say. 135 316

Tihwa (Urumchi), the provincial capital, with a population judged at around 100,000, dominates both the North and South Roads: hence its military and political importance. Nowadays, not to be outdone, it has also been showing great industrial promise. Most of its houses are heated with oil or coal produced in the vicinity. One visitor to Sheng Shih-ts'ai's headquarters saw a piece of coal so huge that it took two men to carry it. 135 361

Farther south, Kashgar (Su-fu), largest oasis in Sinkiang and hub of both transport and political interests from the neighboring lands of Northwest India, Afghanistan, and Soviet Turkestan, is also blessed with natural resources. Kashgar oil, though often merely "scooped out" by primitive means, has long provided the city with gasoline, kerosene, machine oil, and grease. Even Ma Titai, old-school Commander-in-Chief of the Kashgar district at the close of World War I, guessed at the worth of the oil in his domain. He put most of his personal army to the task of tapping wells for him, and almost negotiated a deal with Soviet Russians of Ferghana for modern machinery. The Russians had said they would supply the machinery and would personally see to its being escorted to Kashgar, when Ma's plans hit a snag. His ambitions 361 315 648

2: Norins S-4 (1939-1941) 1944 All Sinkiang All

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PETROLEUM FIELDS IN SINKIANG

Locale	*Field*	*Comment*
Kashgar (Su-fu)	Unnamed	4 mi. long & 2 mi. wide; daily yield, 100 catties for 1 well
Kucha	K'o-la-ya-lun	Over 100 catties daily
Manas (Sui-lai)	Lake An-chi Hai	Largest field in Western China; quality oil comparable to Baku product
	Ch'ia-tzu Wan	4 gushers; output, 20-30 catties daily
	Shih-yü Yen	Output, about 50 catties daily
	T'ung-ku Po	9 wells; output, over 200 catties daily
	Po-lo-t'ung-ko	Operations suspended; former yield, 70 catties daily
So-ch'e	Shang-wo-p'u	70-80 catties daily
T'a Ch'eng (Chuguchak) ..	Black Oil Mt.	9 oil springs; possibly a tar; daily yield of greatest spring, 200 catties
Tihwa	Ssu-pen Kou	7 oil fields in Tihwa, 3 abandoned; Ssu-pen Kou & Su-ta-chang, outstanding
	Su-ta-chang	See above
Wen-hsü	T'a-na-k'o	"Hundreds" of catties "regularly"
	Ma-li-li-k'o Shan	
Wu-su	Tu-tzu Shan	4 fields in Wu-su; 32 oil springs, 15 operating at Tu-tzu Shan

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Iron. Sinkiang iron is distributed both in the north and south. The vein which runs through T'a Ch'eng is really the largest in the province, though that of Khara Balgasun Mountain near Turfan is historically the best known to Chinese. Prime difficulties with iron mining in Sinkiang have been its seasonal or market fluctuations and, as with so

316 many other resources of the province, the failure to apply scientific mining and production processes. Progress has, nevertheless, been made in uncovering many important deposits. Some of them are named below:

IRON DEPOSITS IN SINKIANG

Locale	*Deposit*	*Comment*
Aqsu	K'o-kan-ch'ia	2 deposits | Not high-
	T'ieh-pen-erh-k'o-la-pa-la-k'o	2 deposits | est quality
Ch'ang-chi	Meng-k'o-t'u Ling	
Fu-yüan	Shui-hsi Kou	7 furnaces installed with 600 catties pig iron capacity
Sui-ting (I-li)	So-erh-ko Ling	
Pai Ch'eng	Ming-pu-la-k'o Mt.	
	T'a-erh-ch'i Mt.	Mining area of each said to be less than a mile square
	Ya-se-la-min Mt.	
	Neng-li-ha-t'a Mt.	
	K'o-shih-k'o-k'o-pa-shih Mt.	
T'a Ch'eng (Chuguchak)	K'o-la-t'a-fu-pan to Ch'i-erh Shan	Vein, 130 miles long; largest in province
T'a-pan Ch'eng	Unnamed	
Yangi Hissar	I-ko-jih-ya-yen Mt.	
	A-ha-mai-ti Mt.	

Coal. Samuel Chao asserts that Sinkiang has an annual coal production of about 100,000 tons, while 6,000,000 tons has been the old conservative estimate for what may be a much greater Sinkiang coal reserve. The latter is scattered mainly along the Altai, T'ien Shan, and K'un-lun Ranges. A table of Sinkiang coal deposits which have recently come into prominence is given on the following page.

Gold. Gold resources, too, have long made Sinkiang famous among Chinese; and there is reason. The Altai ("Gold") Mountain deposits of North Sinkiang have proved their value, and other deposits have been found, particularly in the foothills of South Sinkiang. The work

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COAL DEPOSITS IN SINKIANG

Locale	*Deposit*	*Comment*
Barkol (Chen-hsi)	San-t'ang Hu	
	Hsiao Liu Kou	Bituminous
	Kuan-t'an-yao	
Ch'ang-chi	Ch'a-han-wu-su	
	T'ou-t'un Ho	
Fou-k'ang	Big Yellow Mt.	Coal only 10 ft. underground
	Little Yellow Mt.	
Fu-yüan	Unnamed	
Ha-mi (Qomul)	San-tao Mts.	Strata over 35 mi. long with coal sometimes 20-30 ft. underground
Sui-ting (I-li)	Hui-yüan	"Coal caves"; "sizeable output"
Karashahr (Yen-ch'i)	Ha-man Kou	Useful for iron smelting
Kashgar (Su-fu)	K'an-chi-kang	2,000-3,000 ton annual yield; smelts iron
Kucha	Su-pa-yi	"Fine" coal
Pai Ch'eng	K'o-p'ing	
	T'i-li-ko Shan	
	T'a-la-k'o	
	Ya-hsiang-pa	
Shan-shan	Ko-ko-ya Mt.	"Extensive" deposits; 5 mines now in operation
T'a Ch'eng (Chuguchak)	K'u-k'o-ts'ang Mt.	Anthracite; in Tarbagatai Range
Tihwa	Shui-mo Kou	S. Chao says Tihwa coal is "best" in province
	T'ou-t'un Ch'ang	
	Ts'ang-huang Kou	
Turfan	Unnamed	East & West of city; 300-400 workers seasonally
Yangi Hissar	Sa-pa-t'i-k'o	Useful for iron smelting

of excavation in the Altai has been on the increase since 1917 when some 10,000 miners extracted gold valued at over 60,000 taels. In 1942 thousands of miners were said to be operating in the district, though most of the gold mined is reported to have gone to Soviet Russia.

316 Interesting is the claim that a two and a half pound gold nugget once was mined from the Altai Hou Kou field. The richest of the South Sinkiang gold deposits are in the vicinity of Cherchen and Keriya. Local villagers have contracted for extraction of ore from these deposits, and each year over 3,500 taels are said to be paid for the mining privileges. These are the best known gold fields of the New Sinkiang:

GOLD FIELDS IN SINKIANG

Locale	*Field*	*Comment*	
A Shan (Altai)	Tung Kou		
	Hsi Kou		
	Ch'ien Kou		
	Hou Kou		
	Chung Kou		
	Ha-hsiung Kou		"High-est" qual.
	Pan-tang Kou	2½ lb. nug-get mined	
Barkol (Chen-hsi)	Hsiao Liu Kou		
Cherchen (Ch'ieh-mo)	Unnamed		
Ch'i-t'ai (Ku Ch'eng-tzu)	Unnamed		
Sui-ting (I-li)	Ch'iao-li-k'o R.		
Keriya (Yü-t'ien)	A-ha-t'a-k'o Shan		
	Ch'ia-pa Shan		
	Tsao-li-ya-k'o		
	Yu-mo-chiang Shan		
Sui-tung (?Sui-ting or I-li?)	Unnamed		
T'a Ch'eng (Chuguchak)	Ha-t'u Shan	Placer. Between T'a-erh-ta-mu-t'u and Su-erh-t'u Rivers	
Tihwa	Unnamed		

[454] According to rumor, gold is so plentiful in Sinkiang that all Moslem families have their own caches hidden away; many of these are individually of unimportant amount, but the sum total is supposed to be large, and some of the caches are said to be "several thousands of taels." One can understand, therefore, why the Sinkiang gold reserve and annual production have been enthusiastically estimated at 31,300,000

and 50,000 ounces respectively. With all due allowance for exaggeration, there seems little question that if the gold latent in this province can be brought forth into the public markets many of China's, let alone Sinkiang's, financial worries will be eradicated.

Copper and other minerals. There are also considerable finds of copper, alum, quartz, gypsum, nitrate, and common salt in Sinkiang. Of these the 40 per cent pure copper ore that has been extracted from one of two great mines near Kashgar, and the copper deposits at K'ang-shan, Pai Ch'eng, Kucha, Tihwa, I-ning, and Sui-ting are notable. These are some of the recently publicized workings of the province:

COPPER DEPOSITS IN SINKIANG

Locale	*Deposit*	*Comment*
Sui-ting (I-li)	Wu-ts'ung-tao Shan	
I-ning	Ha-erh-han-t'u Shan	
K'ang-shan	Unnamed	
Karashahr	K'u-erh-tai Shan	
Kashgar (Su-fu)	Wu-lan-wu-su R.	20% pure ore
	Su-hun Shan	40% pure ore
Kucha	New Copper Works	
	Old Copper Works	
	Su-pa-shih Copper Works	
Pai Ch'eng	Ho-se-erh Copper Works	
	K'o-t'a Copper Works	
	Kung Po Copper Works	
	Upper Copper Works	
	Lower Copper Works	
T'a-pan Ch'eng	San-chio Shan	
Tihwa	Chai-o-pao	

Industry

Though possibly microscopic in American eyes, the "industries" of Sinkiang deserve, and have been receiving, encouragement. The province has long been known for her handicraft talents in rug-making and silk-weaving, and recently primitive establishments of older days like those for wool-washing and leather-tanning have been improved

3: Skrine G-3 (1922-1924) 1926 All Sinkiang All

Tügene Tar or "Camel's Gorge," so called I suppose because only the long-legged camel is happy in it. In this gorge we had to cross the river nine times, and each time it was more unpleasant doing it on horseback than the last. D.'s old bay horse is splendid in water, as he is well-bred and a high-stepper and so keeps his feet well; but my black is a stumbler on dry land, as I know to my cost, and in the deeper parts of the current he lurches all over the place. Several times he lost his footing and I found myself up to the waist in the cold Qaratash. Luckily the bottom is good at most of the fords and none of the horses were swept down-stream; most Kashgar horses indeed are adepts at crossing rivers, thanks to the practice they get.

A fortnight ago, the Beg says, we could not have got up even as far as this with horses. I asked him how the Kirghiz get through these gorges in summer when the water is too high even for camels; he said that they go on foot, and pointed up to what looked like half a dozen matches spilt over the cliff-face far above us. This, he explained, was a Kirghiz summer "road," *i.e.* thin tree-trunks laid along from ledge to ledge of the precipice, a most terrifying affair.

Just before entering the gorge we came upon chikor (red-legged partridge), and I got two or three, much to the housekeeper's delight. On the opposite side of the river we at last saw signs of present human occupation, the smoke of a camp-fire; I was told that there was a coal-mine there which is worked by the Chinese military authorities with local labour. The "mine" appears to be a tiny affair, a mere surface working employing a dozen men or so.

It was six o'clock before we came to a possible camping place here at Bash Kupruk and we were thankful for the partial shelter of a thicket of tamarisk and willow in which to pitch our tents. There is a deserted Kirghiz hut, too, for the men. An icy night-wind sweeps down the gorge, which they say is even narrower and more difficult ahead, so as there is plenty of firewood and grazing for the camels I have decided to halt here for a day or two and give the animals a rest. We are 7,000 feet up here according to my aneroid, and the cold dry autumn weather has evidently set in; even at Saman this morning, at 6,000 feet, our sponges were frozen hard. However, dry cold is better than either rain or the thick, hazy summer atmosphere, and there are welcome signs that the air is clearing of dust-haze; this morning when we got up we were delighted with the sight from our tents of a magnificent snow-peak rising dimly but grandly above the river-valley straight in front of us. We soon lost sight of it behind nearer heights as we marched on, but there it is, quite close to us. Can it be one of the Shiwakte peaks?

Bash Kupruk, 16th October.

The mountains here are mostly unclimbable except for a properly-equipped Alpine climbing party, but this morning I noticed, about a mile up-river, a spur coming down from the west which seemed comparatively easy. Stein in his traverse of the Qaratash gorge marks here a side-valley called the Kaying Jilgha, which goes right up into the blank patch to the east of Qungur. I accordingly took Hafiz and a Kirghiz guide whom the Beg has managed to collect from somewhere and set up my plane-table first at the mouth of the

3: Skrine G-3 (1922-1924) 1926 All Sinkiang All

of the Kunlun into the "Begship of the Three Hundred Hill Families," which is under the jurisdiction of the Amban of Chira. The people of Polu complain of this arrangement, for Chira is twice as far from them as Keriya. They told me however, that whereas they have always been assessed at ten families only, they number about eighty, so that their cultivation is taxed very lightly.[1] They are industrious cultivators, raising crops of barley, millet and lucerne on every available yard; but the dryness of this part of Asia is such that even here, right under snowy mountains 21,000 feet high, crops have to be carefully irrigated. There are two methods of irrigation in use; where the slope is slight, the fields are terraced in the usual manner; where it is steeper, the entire surface is covered with a key-pattern of channels about six inches deep, down which the water trickles over the whole field, a most laborious business. The chief industry, however, is stock-raising; though they look barren enough, the uplands in this neighbourhood grow excellent grass, owing probably to the fertility of the aerially-deposited loess which is found at the very highest elevations and gives a slightly dirty tinge even to the eternal snow. An excellent type of hill-pony, shaggy but better-looking and with finer hair than the Kalmuck ponies, is found here together with a black and very woolly breed of donkey; I bought one of the former for 32 taels (£4 5s.) and it turned out one of the best hill-ponies I have ever ridden. "Polu pony" as we always called him, besides being strong and willing, was a remarkably intelligent little animal and took in everything that was going on. On the long bare plateaux of Poma Qir and Chata Qir west of Polu we saw herds of yaks and camels as well as the ubiquitous sheep and goats.

An industry which would be of greater importance locally than it is, if the Chinese did not strictly control it and limit the output, is gold-washing. There is no doubt that gold exists in large quantities throughout the length, not only of the Altun Tagh but of the whole Kunlun system. I heard of gold-washing high up among the almost inaccessible gorges of the Upper Yarkand River; Stein mentions it at Pisha in the Qaranghu Tagh (Central Kunlun),[2] and speaks feelingly of

[1] This agrees roughly with what Stein heard at Chakar ("Serindia," pp. 1320–21); that the number of families in the Begship was assessed at 221, but amounted in 1907 to 1,802.

[2] "Ruins of Desert Cathay," Vol. II, p. 210.

3: Skrine G-3 (1922-1924) 1926 All Sinkiang All

316 135 the appalling conditions under which the gold-miners work in the Zailik valley, 13,500 feet up among the peaks to the south-west of Polu; the well-known mines of Surghak and Chizghan, 60–85 miles E.S.E. of Keriya, employ 2,000 labourers even under the Chinese system. Gold is continually being found in new places between Chizghan and Tunhwang in Kansu province, 700 miles eastward. I heard at Keriya of three new mines, all rich, to which there had been miniature "gold-rushes" during the previous two or three years. All the mines between Polu and Cherchen are under the control of the Amban of Keriya, who farms them out to a Beg for a fixed annual weight of gold-dust to be delivered to the Chinese at the fixed rate of 25 taels per tael weight, about five-sevenths of the average market price at Khotan. The Beg is not supposed to extract more than that amount from the mines, but of course he does. He finds, pays and feeds his own miners, whose numbers are augmented at Surghak by numerous convicts. The Chinese do not allow the local people to wash for gold except for the Beg, and as his total output is limited by contract he does not often give the inhabitants of a village like Polu leave to wash for him. As a special favour we were given a demonstration of the primitive methods used. Three boys crawled into a hole in the conglomerate bank of the Polu stream and passed out tray after tray of blueish gravelly earth; a fourth washed it in a wooden pan shaped like a very shallow cone with a slit in it. From each trayful the boy got from two to seven tiny grains of gold, some red, some yellow; in a quarter of an hour he had washed out a quantity which he told us was worth a tenga (*2d.*) at the Beg's rates. In a day's work, he told us, he would get anything from one-tenth of a tael to 10 taels worth (*3d.*–£1 *7s.*).

609 000 The men of Polu are exceptionally friendly and hospitable to Europeans, a fact noticed by Deasy, Stein and the few other travellers who have come this way. The villagers still remember Deasy, though his visit took place as long ago as 1897. The stable in which his ponies were kept is pointed out with pride, also the room in which stayed the Chinese *ssu-yeh* or secretary who was sent by the Amban of Keriya to watch Deasy and prevent him at all costs from finding the secret path over the Kunlun.[1] One of the *bais* or chief men, Tokhta Khalfa, told me with pride that it was his father, Rahim Khalfa, who really helped Deasy to cross the mountains.

[1] Deasy, "In Tibet and Chinese Turkistan," p. 308.

3: Skrine G-3 (1922-1924) 1926 All Sinkiang All

CHAPTER XVI

ALARUMS AND EXCURSIONS

WE returned from Keriya towards the end of May to find Kashgar in a ferment of excitement. For some time past I had known that there was trouble brewing for our local ogre, General Ma, "Titai" or Commander-in-Chief of the forces in the south-west of the province, and self-styled King of Kashgar. Since the famous lunch-party of July 1922, described in Chapter VI, the situation had developed. The old bandit, drunk with power and firmly believing that there was no one in all Central Asia strong enough to call him to account, surpassed all his previous records in oppression. He robbed, blackmailed, mutilated, slave-drove and otherwise tyrannized over the unfortunate inhabitants of the New City and district to his heart's content, snapping his fingers at the remonstrances of the Taoyin and other civil officials. Farmers and petty shopkeepers began to leave the country in large numbers nominally on pilgrimage to Mecca, but in reality to escape the tyranny of the "Padshah."

The interesting feature of the Titai's methods of self-enrichment was that they were not confined to those of the traditional Asiatic tyrant. There was a touch of the practical Chinese business man about him, for he did not content himself with merely transferring wealth from other people's pockets to his own; he created it. He claimed all the minerals of the country as the perquisite of the military authorities, and exploited them for his own benefit. His coal and copper-mines, his oil-wells and refinery, his jade-cutting factory and other enterprises, brought him large profits. As a capitalist his position was an enviable one; for he enjoyed a monopoly not only of raw materials, but also of armed force with which to secure cheap labour and push the sale of his products.

It would take too long to describe the various interesting

N
135 oil field which was discovered near Yümen in northwest Kansu during the latter part of the last war. Though several wells N had been drilled and a small refinery plant established, oil [315] production was never large due to shipping and transportation [489] difficulties. (It might be noted that construction of the Kansu- [499] Sinkiang Railway has been completed up to Yümen in July 1956. Tank cars may now replace trucks in the transportation of Yümen oil.) Despite these adverse factors, the Peking Government's planned economy gives top priority to the development of the known and the search for the unknown mineral wealth of China's Northwest.

N
315 Thirteen construction projects were completed in the Yümen Oil Field, China's biggest oil center, in the spring of 1955. A number of these projects now enable Yümen to produce N eighteen percent more heavy lubricating oil and fifteen percent 316 more kerosene. (NCNA April 22, 1955). A large coal field was discovered in Kansu in April, 1955. It is reported the new discovery with a total of approximately thirty-two million metric tons is four times as large as the A-kan-chen colliery of Kao-lan (Lanchou) county, one of the major coal mines in the province.

S Work has been started by three oil prospecting teams sent N to Sinkiang and Chinhai provinces by the Northwest Geology 315 Bureau under the Ministry of Geology. The prospectors are [654] operating in Turfan and Dzungaria Basins, Sinkiang and in Tsaidam, Chinahai, to locate oil-bearing structures, oil shales, heavy feldspar and other minerals. (NCNA April 19, 1955). One of the plans for 1955 was to complete the prospecting of several oil-bearing structures in the Turfan Basin and obtain the data to design a modern shaft mine in the Urumchi coal field (American Consul General, SCMP, June 1-30, 1955). In addition, rich coal deposits have been discovered in North Sinkiang, particularly in the Ili Valley.

According to 1955 reports, new oil fields were discovered and drilled, e.g., at Tu-shan-tzu, south of Wu-su, and new S coal fields were discovered in Sinkiang. Up to now, eight coal N fields are being worked along the foothills of Tien-shan in 316 Sinkiang, which form one of the largest coal fields in China, ranking third among all the provinces. In coal reserve, Sinkiang is next only to Shansi and Shensi. The present doal reserves of Sinkiang are estimated at 35,040 million metric tons and can last for three hundred years at the present daily output rate of 320,000 tons.

Iron ore and ferro-metals like tungsten, manganese, molybdenum and nickel, as well as some non-ferrous minerals, like gold, platinum, copper, lead and zinc, and aluminum have been discovered and some even worked, especially in the province of

S N 316 [648] Sinkiang. The discovery of uranium and some other fissionable materials has been reported there. While rumors that Sinkiang is being built up into an ataomic arsenal for Russia remain to be confirmed, nevertheless it seems to be of particular strategic importance in the building up of a joint Sino-Soviet Inner Asian fortress.

S N 315 [648] Under a previous Sin-Soviet agreement concluded in 1937, the U.S.S.R. carried out prospecting and drilling in regard to petroleum exploitation. Fields were discovered in several localities, and a refinery was built at the Wu-su field, which, completed in 1940, had a daily capacity of a thousand barrels. This refinery was closed, however, in 1943. The largest field discovered to date, some forty miles in length, is located at An-chi-hai. No estimate of reserves is available at present, but on the basis of known fields and producing wells, Sinkiang has China's most extensive and abundant reserves, far outstripping those of Shensi, Kansu and Szechwan. Moreover, the oil from Sinkiang bores is reportedly of better quality than that found in other provinces in the Northwest.

S 315 316 648 Before the Sino-Soviet Agreement of Moscow on March 27, 1950, the mineral exploitation of Sinkiang was carried out sporadically and on a very small scale, with inefficient local mining methods predominating. Under the terms of the 1950 Moscow Agreements, a joint Sino-Russian petroleum company was formed with Russian-supplied technicians and equipment to undertake prospecting, surveying, working, and refining or petroleum and gas. Two other similar corporations were also organized to explore and exploit the non-ferrous and rare metals. By agreement the products of the corporation were to be divided equally between China and the U.S.S.R., as well as running expenses and profits. Leadership of the corporations was to be assumed by representatives of the two contracting parties in rotation for periods of three years and the corporations were to be staffed by an equal number of citizens from each of the two countries. The agreements were supposed to be valid for thirty years. (China Weekly Review, July 1, 1950, p. 82). It has been reported that all three Sino-Soviet joint corporations have been transferred to Chinese ownership, although with Russian advisers, since the beginning of 1955. At the same time, the Peking Government, together with Sinkiang authorities, sent out three large survey teams to search for new mineral deposits.

N 135 Northwest China has a great variety of minerals, only a few of which have been even partially developed. In addition to the rich oil fields of both Kansu, Sinkiang, and possibly Shensi, and the abundant coal deposits of these three provinces, other recently discovered minerals are as follows: rich copper deposits

N
135 region, even excluding Shansi, ranks high and accounts for about half the coal deposits of all China. The known coal reserve of Shensi amounts to over 72,950 million tons and
S
[135] that of Sinkiang is over 35,000 million, about half that of Shensi. Most of the coal deposits of the Northwest are of good quality and have been exploited very little. Thus they provide sufficient fuel for industrial development for a considerable length of time.

N Some New Coal Discoveries:
316 Some new discoveries of coal deposits have been reported. In addition to the previously mentioned, newly discovered big coal field in west Kansu, which is estimated to have a reserve four times that of A-kan-chen colliery, one of the major coal mines in Kansu, new coal deposits are found in the vicinity of Ching-tai in north Kansu in 1954. Large scale and detailed prospecting is now under way. Also, many prospecting teams are searching for mineral deposits in the Chiu-chuan (Su-chou) district of northwest Kansu and in the Tsaidam Basin of Chinghai province. (FBIS, Daily Report, No. 102, 1955). Mining machinery and other equipment are now being sent from Sian, the capital of Shensi, to the site of the deposits. Drilling teams arrived and have been working since early May, 1955; it is said when put into operation, the new coal field will supply Lanchow, the capital of Kansu, and Kan su-Sinkiang Railway and the Paotow-Lanchow Railway lines, both of which are now under rapid construction. (NCNA April 24, 1955). Deposits of good quality coal have also been discovered in the Tsaidam Basin, Chinghai, where oil is being prospected. The coal deposits consist of seven seams totalling some twenty-five meters in thickness. They are suitable for open-cut working (NCNA, June 19, 1955).

S In Sinkiang, coal deposits are widely distributed. They are
135 found in the vicinity of Aksu, Kucha, Kurin, Turfan, Urumchi, along both shores of the Ili river, and in the north of Chuguchak. In addition to the above-mentioned places, high quality coal deposits are located along the northern slope of the Tien-shan mountains in Wu-su district. The Sinkiang coal belongs to Jurassic formation. The deposits are of exceptional good quality with thick seams. Most are bituminous and some may be good for coking industrial uses.

Sinkiang's coal deposits were estimated at over 35,000 million metric tons in 1955 (32,000 million in 1950), fourteen percent of China's total. The richest coal beds in the province are those of the Ili valley and near Urumchi. There are good anthracite beds in both places. Similar beds are also found
S near Aksu, Kucha, Yenchi and Hissar. Geological teams were
316 sent in early 1955 to investigate the two large coal fields in

S
316 Sinkiang. One lies near Urumchi, the capital of Sinkiang and the other is in the Kuldja area in the Ili river basin. Data are collected for designing a modern coal mine in the Urumchi coal field where large deposits of good steam coal have been proved to exist. The two coal fields will in time supply fuel for the Lanchou-Urumchi-Alma Ata Railway Line which is now under rapid construction.

N
316 Coal Mining and Its Production:

While the Northwest leads in coal reserve among the major geographical and administrative areas, its production is still small compared to the Northeast and North China. This has been mainly due to the difficulty in transportation and backward mining techniques. At present, the only mining of importance takes place in Tung-kuan near Sian in Shensi, at A-kan-chen near Lanchow in Kansu and ad Urumchi in Sinkiang. They are close to the populous administrative centers of the three provinces. The coal mine at Tung-kuan is connected by a xixty mile long sideline of the Lung-hai Railway at Hsien-yang which is close to Sian, the capital of Shensi. A number of
N the small mines in Tung-kuan are still privately owned. But
[655] since 1954, the Government has taken over control of production and sale of ninety-five percent of the coal production in these
N mines. The villagers were conscripted to transport the coal
[466] by mule collie carrier and ox cart (TKT, June 17, 1954). In addition, primitive coal mines for local use are also found at Pai-shui, Pu-cheng, and Lung-hsien.

The chief coal mine worked in Kansu is in A-kan-chen, near Lanchow, where primitive methods are still used. There are other coal mines in Liang-tang, Wu-tu, Min-hsien, Tien-shui, and Cheng-hsien. Small coal mines are also located along the eastern foothills of the Ho-lan-shan Range between the districts of Chung-wei and Teng-kou in former Ninghsia province. Production will be increased when adequate machinery is supplied.

S
316 Coal mining in Sinkiang is also carried on mainly by primitive methods which are crude and cumbersome. Up to the present the coal mined has only been used locally. Because of the primitive nature of mining, many accidents occur and the fatality rate is high.

The major coal producing areas are at Ta-cheng and Tihua and Hami on both sides of the Tien-shan mountains. Considerable coal mining is done on a small scale for local consumption as fuel, but extensive development of coal reserves must await the completion of the Kansu-Sinkiang Railway. At present, eight coal fields are being worked near Tihua (1955-56), which extend to about fifty kilometers, having thirty seams. In addition to Urumchi, coal deposits are apparently also being

S 316 worked at Kitai (Ku-cheng), Sui-lai, Kucha and Aksu. Table IV shows the general distribution of coal reserves and their production.

c. Reported Fissionable Materials

It has been reported that fissionable materials such as uranium and thorium are produced in Sinkiang province. S [648] It is even rumored that the province is being built up into an atomic arsenal for Soviet Russia and Communist China, although no definite information is available. Perhaps this is an exaggeration, for present means of communication and transportation are below the minimum that would be required for running the complicated machinery necessary for atomic plants. Nevertheless it is pointed out that "...in the city of Arason (A-shan), Ili county, an abundant amount of wolfram and uranium is mined. In Conca (Ku-ch'eng), Urumchi country, uranium is mined. It is reported that in a concealed mine at Ulugcat city on the Russian border of Kasgar (Kashgar), thousands of persons were occupied with mining. Copper, gold, and oil were obtained from the Ulugchat area, and the concealed mining activities show that there are also mined some strategic minerals. (Bughra, Mehmet Emin: Doghu Turkestan, pp. 84-85).

N 377 d. Hydroelectric Power:

Except for the thermoelectric plants of Sian, Lanchow, and Urumchi, no hydroelectric power is known to be in existence in the four provinces of Northwest China. It was reported the S [377] Urumchi power plant can produce forty percent more electricity than the sum total produced in Sinkiang province prior to the recommission of the plant in December, 1953. While this, on the one hand, indicates the inensified production of electricity production in the provincial capitals, like Urumchi, it shows on the other the limited development of electric power plants S [377] in the region of the whole Northwest. A power generator was recently installed in Urumchi, and another at Ulapo in the province of Sinkiang. (KM Sept. 15, 1955). However, a gigantic scheme of water power development is planned along the mid-Yellow River course.

N 377 653 According to Li Jui, a member of the Yellow River planning commission, a plan to tame and exploit the Yellow River, by building forty-six dams from the Lung-yang gorge above Kuei-teh in eastern Chinghai and San-men (in west Honan) gorge below Tung-kuan of eastern Shensi for hydroelectric development and irrigation, was passed by the National People's Congress on July 30, 1955. (Li Jui: China's Sorrow will be no more - the Taming and Exploiting of the Yellow River, People's China, August 6, 1955, pp. 9-15). The actual work of the plan to harness the Yellow River was started in 1954. The plans call for two large hydro-power stations to be built, one at Liu-chia

and Liu-pa followed by Lüeh-yang, Tsu-nan, Chenan and Hsihsiang, where primitive mining has been carried on by native methods. The total annual production is less than 2,000 tons.

In Kansu, iron ore is mined in the districts of Liang-tang, Hui-hsien, Cheng-hsien, Hsi-ku, Yung-tang, Tien-shui, and Wen-hsien. The total output is about 25,000 tons, while the total reserve of Kansu is said to amount to 12,600,000 metric tons.

Iron ore deposits have been reported in Chinghai, but no further data are available.

In Sinkiang, iron deposits are distributed both in the northern and southern parts of the province. The largest vein is the ore which occurs at Ali in Kucha with a reserve of nearly three million metric tons and a content of thirty percent. It is specularite ore. There is another specularite ore deposit in the hills west of Urumchi. It has a reserve of 750,000 metric tons with a content of twenty-five to forty percent. Other iron ore deposits are found at Pai-cheng, Chang-chi, Fu-yüan, and Ta-cheng. However, the vein of Khara Balgasun mountain near Turfan is historically the best known to the Chinese. The iron mines at Kizil near Yarkand are also of high quality. Extensive iron beds are also reported at Yengi Hissar and in the Ili valley. At present, iron ore is mined mainly in Kashgar. Before World War II, there were some four or five smelting furnaces in operation with a yearly production of 150 tons or iron. Now, according to 1955 reports, in Urumchi a steel factory is producing agricultural implements, etc. There is a factory for repairing automobiles, and one for producing machine tools. They are modest, but this does not mean that other factories, about which the press is silent, do not exist.

With regard to the distribution of iron ore in Sinkiang and the northwest as a whole, the following two tables may be found useful. (See Tables V and VI.)

b. Ferro alloys:

Tungsten, molybdenum, and nickel have been reported in the province of Sinkiang, and manganese in Kansu. With regard to their distribution and reserves very little information is available. Tungsten is produced at Chi-ka-tai, Ho-ssu-tai and Chü-li-kun, north of Wen-chuan-hsien in Sinkiang. A reserve of 8,600 metric tons is estimated for the three deposits; mechanized mining with Soviet equipment has started. Molybdenum is produced at Na-lu-kou and Pa-tu-lu-kou in Ching-ho-hsien. A total reserve of 2,000 metric tons for the former and 7,000 tons for the latter are estimated. The ore is reported to have a content of sixty-five percent WO_3. Manganese ore is found at Hsi-wan of Kan-ku Hsien and Shan-lan-men-shih of Yung-teng-hsien in Kansu. The former has a reserve of 200,000 metric tons with a content of 41.47 percent MnO_2 and the latter

1, [See p. 131--Analyst]

N S 135 has a reserve of 700,000 metric tons. Pozdneev, D. M., mentions that nickel exists in Sinkiang in his Ocherki Stran Dal'nego Vostoka (Essays on Far Eastern Countries), pp. 164-66, but no further data are available.

3. Non-ferrous metals

Among the non-ferrous metals of northwest China Copper, gold, platinum, silver, aluminum, lead and zinc are relatively S 316 important. The air approach to the Koz-tokai mining area of [508] the Sinkiang Non-ferrous Metals Company is a vast snowbound area on the eastern side of the Altai Range on the Sino-Soviet S border. A smooth highway runs from the airfield to the mining [491] town. (Urumchi, Uighur, Feb. 1, 1955, 1150 GMT. -B. cited by FBIS, No. 25, Feb. 4, 1955).

S N 135 a. Copper:

Rich copper deposits have been found in Shensi, Kansu, and Sinkiang. In addition, bornite, presumed to be very rare in the Eastern Hemisphere, has been discovered in south Shensi province, leading to the belief that China may have additional rich bornite deposits. Sinkiang also has considerable copper ore deposits of high quality. It is the most important non-ferrous metal resource of the province. It is found in the Ili river valley, in the northern foothills of the Tien-shan and in the S Pamir Mountains, near Kashgar. The copper ore mined near N Kashgar is reported to have a content of thirty to forty percent 316 pure copper and the deposits spread over 600 square miles. The copper ore mined near Kashgar contains thirty-five percent iron and sulfur. That mined at K'ang-shan, Pai-cheng, Urumchi, I-ning, and Sui-ting is also notable. Since native methods are inefficient, some mines originally worked were forced to close, i.e., those near Urumchi, Kashgar and west of Ili. Many other local deposits are known. Before World War II the copper output in Sinkiang was 150 tons a year. In 1930 a state copper melting factory was put into operation in Kashgar which, in addition to processing copper ore, also minted copper coins. The following two tables indicate the distribution of copper mines of Sinkiang and the copper ore deposits of Northwest China in general (Tables VII and VIII.) 1 A

S b. Gold and Platinum:

135 Gold is particularly rich in Sinkiang. It is widely spread, stretching from the Altai on the north to the Kunlun-Altyn-tagh mountains in the far south.

The names of Altai and Altyn Tagh Mountains mean gold in the Mongolian language. Nuggets weighing as much as forty-four ounces have been found here. Pigeon-egg sized nuggets are also found. Platinum is reputed to exist in the Altai mountains S too. Rich gold mines are found in the vicinity of Khotan, 316 Karagaitash, Sorghal, Keriya (Yü-tien) Cherchen, Yarkand,

1, A [See p. 132-- Analyst]

S 316 and Karashar. Both placer and lode or vein gold are mined. Placer gold is mined in the Ili River, the Kashgar River, S [804] Alintu River, etc. From 100 poods of ore, two to three zolot- [433] niks of gold are obtained (one pood : 16.38 kg. and one zolotnik: ninety-sixth part of a former Russian pound). One lode mine is said to have 1.6 ounces a ton. Placer gold is also found in Chinghai. Gold has been exploited systematically in both primitive and modern ways. Where water is available, gold is obtained by washing; where water is not available, by sifting the dirt in wind. The yearly gold output of the province is said to total 100,000 ounces. Gold mining operation in the Altai mountains has been on the increase since 1917 when some 10,000 miners extracted gold valued at over 60,000 taels. In 1942 S [439] thousands of mines were said to be operating in the district though most of the gold mined is reported to have gone to Soviet Russia. It is claimed that in the Altai Hou-kou field, a two and a half pound gold nugget was mined. Cherchen (Chieh-mo) and Keriya (Yü-tien) are the richest gold deposits of southern Sinkiang. It is said that gold is so plentiful in Sin-kiang that all Moslem families have their own caches hidden N away. Gold is panned at irregular intervals from the Hsi-ning 316 and Ta-tung rivers and their tributaries in Kansu province. (See Table IX.)

S 135 c. Silver and Lead: Lead is most extensively distributed in Sinkiang; it is next only to copper in its wide spread.

Silver-lead ore is located in Burlutugai, near the Sairam Lake north of Kucheng and some other places. Lead content S [316] in the ore is up to thirty percent. Mining is carried on very primitively. Lead mining has been carried on at Wu-shih, Yenki, Wusu, Paicheng, and Kashih. At present, only the deposits at the last two places are being worked. Output is very low because of the backward working methods. Silver is much in evidence at Khotan and Karashar.

d. Aluminum and Bauxite

Rich aluminous ore deposits are located in the north of Kucha near Baldir, also in the vicinity of Yu-tien (Keriya) and some other places. In addition, bauxite from which aluminum is extracted, has been found at Ho-feng (Hishih-Tologai) in Sinkiang.

N 135 4. Non-metallic Minerals:

The important non-metallic minerals of Northwest China are salt and gypsum as well as jade and other precious stones.

a. Salt and gypsum.

Ninghsia of Kansu, Chinghai and Sinkiang are extraordinarily rich in salt. The numerous lakes and dried up lake basins provide the basic sodium salt. In eastern Alashan of former Ninghsia province, the Kilantai and the Charatai Dagasu are the most

1: Washington S-4 (no date) 1956 AF13 Northwest China AF13
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N S 135 C. Minerals of Secondary Importance.

Many other minerals, both metallic and non-metallic, have been discovered in the Northwest, particularly in Sinkiang. Among the metallic ones are antimony, zinc, tin, mercury, pyrite, etc. Among the non-metals are magnesite, graphite, sulfur, arsenic, nitrate, asbestos, alum, asphalt, ozocerite, marble, limestone for cement making, etc. N S 316 Since mining operations have not yet begun in most cases, it is impossible to predict whether these will prove to be worthwhile, with the exception of magnesite and limestone for cement making.

N 135 1. Magnesite and Cement making:

Large deposits of magnesite are found at Tzu-hu county (38.50 by 105.32) of former Ninghsia province, with a reserve estimated at 38,000,000 tons. N 339 A modern cement plant is being built in Kansu province. The cement plant will be the first of its kind in thisprovince, and it will be able to meet local demands for cement. Housing for the workers, an extension railway line and a long distance telephone linking up the site were completed at the end of 1954. (FBIS. No. 25, Feb. 4, 1955).

S 316 2. Pyrite and Sulfur

Production of sulfur is reported in the vicinity of Khotan, Sinkiang. N 135 A pyrite deposit is also reported in the Tsai-ku area of Shensi province at the junction of the districts of P'u-cheng, Pai'shui, and Cheng-cheng (or about 35.03 by 109.33). The field is 3.5 miles square, extending on both sides of the Lo-ho River, with veins one to two feet thick. Reserves were given as 4,000,000 tons with a sulfur content probably reaching fifty-three percent, making it the best in the world. (Ref. Industrial Monthly, June 1, 1944, Sian). This may be the same as the Han-chiao-ho field. As China turns to industrialization, the demand for sulfur and sulfuric acid will increase.

3. Asphalt and Ozocerite

In the region of Lake Ayar, large deposits of asphalt and ozocerite are found, but so far they have not been worked.

4. Graphite

Graphite is found at Mei-hsien (34.18 by 107.43) in Shensi province.

III. Population

S N 131 161 A. Introduction

The Northwest Region covers the provinces of Shensi, Kansu (including Ninghsia), Chinghai, and the newly established Sinkiang Uighur Autonomous Region in the former Sinkiang Province. Sinkiang alone is larger in area than France, Germany, and

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TABLE IV. China's Northwest:Coal Reserve Distribution by Provinces.[1]
(Reserve in million metric tons and production in tons)

Province	Anthracite	Bituminous	Total	Production(1955)
Shensi	750	71,200	71,950	650,000
Kansu	59	997	1,656[3]	110,000 (240,000 in 1947)
Ninghsia(now belongs to Kansu)	173	284	457	140,000
Chinghai	240	584	824	40,000
Sinkiang		31,980	31,980[2]	180,000

1. Mining Report, 1945, Chinese Geological Survey, cited by Nelson Dickerman:Natural resources of China, Foreign Minerals Survey, II, No. 7, (1948) Washington D. C. U.S.Bureau of Mines and also by George B. Cressey: China's 500 Million, 1955.

2. Present coal reserve of Sinkiang is estimated at 35,040 million metric tons.

3. A new discovery of 32 million metric tons of coal in 3arly 1955 should be added to Kansu's total reserve.

TABLE V. Iron Deposits in Sinkiang Province*

Locale	Deposit	Comment
Aksu	Ko-kan-chia	two deposits not of highest quality
	Tieh-pen-erh	" " " " " "
	Ko-la-pu-la-ko	
Ching-chi	Meng-ko-tu-ling	
Fu-yüan	Shui-hsi-kou	seven furnaces installed with 600 catties pig iron capacity
Sui-ting (Ili)	So-erh-ko-ling	
Pai-cheng	Ming-pu-la-kou mtn.	mining area of each said to be less than a mile square
	T'a-erh-chi mtns.	
	Ya-se-la-min mts	
	Neng-li-ha-ta mtn	
	K'o-shih-ko-ko-pa-shih mtn.	

1: Washington S-4 (no date) 1956 AF13 Northwest China AF13 Sinkiang All

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TABLE V. (Continued)

Locale	Deposit	Comment
Tā-cheng(Chuguchak)	K'o-la-ta-fu-pan to Ch'erh Shan	vein 130 miles long largest in province
T'a-pan-cheng	unnamed	
Yengi Hissar	I-Ko-jih-ya-yen mtn	
	A-ha-mai-ti mtn.	

* Noris, Martin R.: Gateway to Asia, Chap. IX, pp. 113-14.

TABLE VI. Distribution of Iron Ore Reserves of N. W. China by Provinces*

(Reserve in 1000 metric tons, and production in metric tons)

Province	Proved	Estimated	Total	Percent	Production
Shensi	4,847	6,000	10,847	0.50	1,800
Kansu	2,196	310	2,486	0.10	24,000
Ninghsia	5,079	2,500	7,579	0.35	
Chinghai		5,000	5,000	0.23	
Sinkiang	47,537	1,200	48,737	2.23	

*PAI, CC: General Statement on the Mining Industry. Geological Survey of China, special Report, No. 7, Dec., 1945.

N.B. 1. The total iron ore reserve of Shensi has been raised from 0.5% to 2.3% of the nation's total. That would give it an approximate total of 50,000,000 metric tons.

2. The total iron ore reserve of Kansu has been raised to 12,600,000 metric tons.

1: Washington S-4 (no date) 1956 AF13 Northwest China AF13
Sinkiang All

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466 Forced labor in the strict sense, or "corrective" labor, has however also been amply used. Conscript labor solved several of the problems connected with the labor situation in the Northwest. "Free" or induced labor had to be given certain incentives, such as higher wages and better living conditions in order to overcome non-economic barriers to labor mibility, such as language barriers, differences of customs and living standards, differences of climate, etc. For skilled and semi-skilled labor these incentives might prove a worthwhile investment; for unskilled labor, however, a cheaper labor supply was desirable. Conscript labor would also overcome the problem of labor discipline, which is prone to be particularly serious among laborers working far from home. Specifically conscript labor could be employed at a level of subsistence far below the minimum to be paid to a recruited or induced labor force; it could be employed in dangerous work without the necessity of using costly safeguards against accidents; and it had the advantage of perfect mobility and could be moved around without regard to family and other social ties. In the following, some reports, mostly collected in summer 1955 among Turkestani refugees are given to throw some light on the extent of conscript labor used in the Northwest.

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648 From a refugee in a colony in Yugoslavia, called Yengi Khotan "New Khotan":

In 1950 at an open People's court session in Cherchen, former Kuomintang officials, influential merchants and landowners were tried, sentenced and dispossessed of their property. They were transported to Charklik (Chin.: Cho-chiang) from where they proceeded in a southeastern direction where a new auto highway was being constructed. The prisoners were formed into working units which were led by Soviet soldiers of the Seventh Regiment. Halim estimates that at least six to ten thousand prisoners were working between Charklik and Timurlik. Each three hundred men was headed by a Russian corporal or sergeant. He said that the real masters of the area were the Russians, and he repeatedly emphasized that the latter treated even the Chinese Communist officials with no respect. Furthermore, he saw several mining projects in this area, especially gold mines. When he was transferred to the area of Tash-Kurghan (Turk.: Stone tomb) in 1953, he managed to flee to the Wakhan area of Afghanistan.

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199 Reports, published in Turk-i-stan, Arabian edition, March 1955, Rawalpindi, Pakistan, give a limited account of the railway construction between Turfan and Hami. It states that since May, 1953, about 80,000 prisoners have worked there. The main body of prisoners consisted of Chinese, but there were also thousands of New-Uighurs, Kazakhs, Mongols and

4. Sinkiang

Industrial development in Sinkiang is perhaps the fastest in the entire Northwest. As early as 1950, four Sino-Soviet joint-stock companies were established in Urumchi, of which three were industrial plants. They were: (1) Sino-Soviet Nonferrous Metals Company, (2) Sino-Soviet Rare Metals Company, (3) Sino-Soviet Petroleum Company and (4) Sino- Soviet Airlines. All the Soviet stocks were reportedly transferred to China at the end of 1954, but the Soviet technicians have remained there to help train the Chinese workers.

After the Communists took over, the Sinkiang Petroleum Company has been greatly expanded. Its crude oil output in 1955 is said to have been sixty-three percent higher than in 1954, and deep testing wells were being sunk in five new districts in the Gobi Desert to investigate their oil reserves. The five districts are located in the Turfan and Dzungaria Basins in the Sinkiang-Uighur Autonomous Region.

Another important industrial plant in Sinkiang is the July First Cotton Mill, which began production in 1952. In early 1955, 16,500 spindles and 600 looms were added, which will double the mill's cloth output. The total number of spindles was then over 30,000 and of looms, one thousand. This is the first modern textile mill built in Sinkiang, and it supplies the thirteen nationalities there with a rich variety of fabrics manufactured from the cotton grown in the province itself.

According to the province's initial plans, the investment in capital construction during 1955 is to be increased by over sixty percent as compared with 1954. A total of twelve construction jobs are to be newly built or rebuilt. Preparations are under way for these works. Among the new projects are a modern cement factory, a sulphuric acid factory, a small hydraulic power plant and an oil pressing mill. The cement factory was expected to have its first stage of construction completed in 1956. When completed, this factory will save the state a total of ten million yuan each year in the cost of transporting cement from China Proper. When the sulphuric acid factory starts production, it will supply all the raw material needed for printing and dyeing works by the July First Cotton Mill.

The eight units to be rebuilt in 1955 include the Liu-tao-wan Colliery, the Sinkiang Machine Works, the Ceramic Factory, and the First Cement Factory. When the underground tunnel of the Liu-tao-wan Colliery is rebuilt, it will be possible to produce more coal for the industries and local residents of Urumchi. The output of modern farming tools will be increased when the Sinkiang Machine Works is rebuilt. After a set of automatic equipment is added to the glass workshop of the Ceramic Factory, there will be nineteen additional kinds of new products to supply the market.

3:Cable & French M-5 (1926) 1927 AF13 Northwest China
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'The Governor declares,' read the officer, who this morning was in a flattering mood, 'that the three ladies, Feng Precious Pearl, Feng Polished Jade, and Kai All Brave, are people of the highest reputation, and therefore they, their escort and baggage, are permitted to enter Turkestan without delay.'

There was great lamentation in the garrison when the men saw us preparing to leave. 'They say that next week we shall get our pay, and if this be true we would have bought all your remaining books!' The gaming tables were abandoned as the crowd gathered to say good-bye and wish us good luck, and as we left the ravine an orderly appeared carrying a handful of vegetables—two cucumbers and a melon—from the officer's wife. The supply of these luxuries from Hami being very limited this gift represented a whole day's ration for her household.

It was with a delightful sense of freedom that we emerged from the 'Ravine of the Baboons' and took the desert path once more. We had left the grey and black pebbles of the Black Gobi behind us on the south side of the ravine, and we now came out into a most interesting and varied country. Granite hills surrounded us, and frequently the carts had to be dragged over immense slabs. The soil in places was red; the outlines of the ranges of hills were bare and rugged, while their colouring was as delicate as it was remarkable. Blue, purple, green and grey stretches of rock lay all around us, and as sun and shadow played on them the whole landscape was iridescent with the tones of the rainbow. We also passed at the very foot of the Starry Mountain, and there delayed a few minutes so as to fill our hands with the glittering fragments of quartz. At the base of the granite rocks were excavated holes, large enough to admit the entrance of a man's body, and

3:Cable & French M-5 (1926) 1927 AF13 Northwest China
Sinkiang AI 1

these proved to be gold-mines from which the sand, having been removed in baskets, provides a fair amount of gold-dust, after being washed out. In some places[1] the grit on which we walked was composed of minute granite fragments of every colour, and it was very interesting to notice that the little, grey, desert lizard, which had never left us all through our travels, had so accommodated itself to the soil in which it lived that its skin had become many-hued, like a beautiful mosaic, so that it was indistinguishable from the surrounding ground.

A large temple stood on an eminence not far from the ravine, and here we found the lamas, who had been as prompt as ourselves in quitting the camp, burning incense and making obeisance to the gods. The lamas expressed some surprise that we neither burned incense nor prostrated ourselves, nor sought the blessing of the Guardians of the Road by striking the temple bell with its wooden hammer to call their attention. We were the only travellers on that road who would dare to take such a journey without observing this ritual, and such an omission must be either a sign of impiety or that we enjoyed the protection of a power superior to any god in that temple. 'We never start on our day's journey without asking the blessing of God,' explained one of our carters, who two months previously would have been as unwilling as the lamas themselves to leave without the blessing of the Goddess of Mercy.

It was fortunate for us that this first journey, taken as it was by day, was not an abnormally long one, and by 10 p.m. we reached Shachüantz—'The Spring of the Sands'—but unfortunately it surpassed all the others we had hitherto sampled for the bad quality of its water, which was metallic as well as bitter and salt. The slabs of granite over which we had driven had,

[1] [Near Hsinghsinghsia -- Analyst]